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EXAMINER
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ART UNIT	PAPER NUMBER
232	5

DATE MAILED:
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This is a communication from the examiner in charge of your application.

COMMISSIONER OF PATENTS AND TRADEMARKS

[X] This application has been examined   [ ] Responsive to communication filed on _____   [ ] This action is made final.

A shortened statutory period for response to this action is set to expire __3__ month(s), __0__ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned.   35 U.S.C. 133

Part I   THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. [X] Notice of References Cited by Examiner, PTO-892.   2. [ ] Notice re Patent Drawing, PTO-948.
3. [ ] Notice of Art Cited by Applicant, PTO-1449   4. [ ] Notice of informal Patent Application, Form PTO-152
5. [ ] Information on How to Effect Drawing Changes, PTO-1474   6. [ ] _____

Part II   SUMMARY OF ACTION

1. [X] Claims __1 THROUGH 25__ are pending in the application.

   Of the above, claims __none__ are withdrawn from consideration.

2. [ ] Claims _____ have been cancelled.

3. [ ] Claims _____ are allowed.

4. [X] Claims __1 THROUGH 25__ are rejected.

5. [X] Claims __21 IS OUT OF ORDER AND__ __IS__ objected to.

6. [ ] Claims _____ are subject to restriction or election requirement.

7. [X] This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.

8. [ ] Allowable subject matter having been indicated, formal drawings are required in response to this Office action.

9. [ ] The corrected or substitute drawings have been received on _____. These drawings are [ ] acceptable;
   [ ] not acceptable (see explanation).

10. [ ] The [ ] proposed drawing correction and/or the [ ] proposed additional or substitute sheet(s) of drawings, filed on _____.
    has (have) been [ ] approved by the examiner. [ ] disapproved by the examiner (see explanation).

11. [ ] The proposed drawing correction, filed _____, has been [ ] approved. [ ] disapproved (see explanation). However,
    the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are
    corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO
    EFFECT DRAWING CHANGES", PTO-1474.

12. [ ] Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has [ ] been received [ ] not been received

    [ ] been filed in parent application, serial no. _____; filed on _____.

13. [ ] Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in
    accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. [ ] Other

15)   Claims 1 through 25 are provisionally rejected

under 35 U.S.C. 101 as claiming the same invention as

that of claims 1, 2, 5, 6, 11, 13, 15-25 and 30-37 of

copending application Serial No. 425,612.

        This is a provisional double patenting
rejection since the conflicting claims have not in fact
been patented.

        a)   The above two sets of claims are identical as

is the applicant in the two applications. This

application is a CIP of the conflicting application

(e.g. SN 425,612) which is still pending.

16)   Claims 1 through 25 are rejected under 35

U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim

the subject matter which applicant regards as the

invention.

        a)   In Claims 1, 4, 5, 8, 14, 18 and 22, it is

uncertain exactly how to construe computer "system for

contemporaneous real-time entry and compilation of a

program having source code" (Claim 4), computer "system

for contemporaneous real-time entry and compilation of

source code" (Claims 5 and 8), compiler "system for

real-time compilation of source code as the latter is

entered at a console keyboard" (Claims 14 and 18) and

computer "system for real-time compilation of source

code concurrently as the source code is being entered

into the system" (Claim 22) appearing variously in the

opening lines of each of such claims. Is the "entry"
and "compiling" done at the "same time" in "real-time"
as Claims 1, 4, 5, 8 and 22 are claiming? Are the
expressions "a source program", "a program having source
code" and "source code" appearing Claims 1, 4 and 5, 8,
14, 18 and 22, respectively, supposed to encompass the
same material? Is there any difference between a
microcomputer (or computer) "system" as set out in
Claims 1, 4, 5, 8 and 22 and a compiler "system" as set
out in Claims 14 and 18, and if so, what is it?

     b) In Claim 1, it is uncertain, (1) exactly where
the antecedent basis for the "translation of the source
program" appearing in lines 6-7 (e.g. isn't
"compilation" more correct?), (2) exactly what is meant
by "a vector address leading to said interrupt service
routine" (emphasis added to lines 11-12) for why a
"vector address" is used and what is contemplated by
"leading to" are both subject to too much speculation to
be definite, (3) exactly where the antecedent basis is
for "the partial source program" as set out in lines 15
and 17-18 thereof, (4) exactly how the console means as
set out in supra lines 3-4 (to input successive
characters) has the capability to activate the
"interrupt input" as set out in supra lines 3-4, exactly
how source program characters can be used to execute
editing commands as is set out in lines 24-26 or exactly

what is edited, (6) exactly how the editor means as set out in lines 27-30 has the capability to designate the "pause" location as set out in lines 27-30 or what "further portion" of the source program is being referred to in such lines for no previous "portion" thereof is considered to have been claimed (see also infra lines 34-35), (7) exactly how the compiler can be used as per lines 31-33, since according to supra lines 20-23 control of the system has been passed from the compiler to the interrupt service routine, or (8) exactly how to correlate what is set out in lines 36-39 with what is otherwise claimed (e.g. "input characters" and "editing commands" appearing in supra lines 24-26; "additional portions" in lines 34-35; "the partial source program" in lines 14-16; and "successive characters" in lines 3-4).

c)   In claim 2, it is uncertain, (1) exactly how the modifying as set out in lines, e.g. 2-3 thereof, can be correlated to the entering execution functions as set out in lines 24-26 of parent Claim 1, or (2) exactly where in the sequency of events set out in parent Claim 1 would the modifying and reinitialization functions as set out therein be incorporated. Besides the above comments re Claim 2, such claim is also rejected for being dependent upon a rejected parent without curing the deficiencies pointed out for its parent Claim 1.   In

Claim 3, it is uncertain, (1) exactly what "operation"
of the editor is being referred to in lines 6-7 in view
of what is set out in lines 24-26 of parent Claim 1 or
what would be "the location of the source program to be
affected" as is set out in such lines 6-7, (4) exactly
how to correlate the initialization as set out in lines
14-15 with the initialization in line 13 in parent Claim
1 or the passing of control to the interrupt service
routine as per lines 20-23 of such parent Claim 1, or
(5) exactly where in the series of events set out in
parent Claim 1 and as modified by preceding lines 1-15
of this claim that the reinitialization of the compiler
as set out in lines 16-18 is done.

    d)   In Claim 4, it is uncertain, (1) exactly how
to construe lines 6-7 for the "," in line 6 is
considered to have created disjointed phrases the
meanings of which are considered
subject to too much speculation to be definitive, (2)
exactly how to correlate the successive entering of
input characters constituting a portion of the source
program by the editor as set out in lines 8-11 with the
input of successive characters constituting the source
code as set out in supra lines 4-7 thereof, (3) exactly
what type of "an editor" is contemplated that has the
capability of including the "entering" and "execution"

functions set out in lines 8-11 and have "means therefor

or where the antecedent basis for "the source program"

appearing in line 10 thereof (see also, infra line 19),

(4) exactly how to correlate the passing of control to

"said editor" as set out in lines 17-18 thereof in view

of the "entering" and "executing" as set out in supra

lines 8-11 for using the "means-plus-function" format,

the functions are normally presumed to be performed by

the associated means, (5) exactly how to correlate the

designation (by the "editor"?) as set out in lines 19-21

with the passing of control to the "editor" as set out

in supra lines 17-18 (e.g. for performing the two

functions set out in supra lines 8-11?), (6) exactly how

to correlate what is set out in lines 22-25 with what

has been previously claimed especially in view of the

passing control (of the system) to the "Editor" as set

out in supra lines 17-18, or (7) exactly how to

correlate the return of control to the compiler upon

"entry of at least one input character or the execution

of an editing command" as set out in lines 26-28 in view

of the successive entry of "input characters ... to

store a portion of the source program" and the execution

of "editing commands" (emphasis added to supra lines

8-11).

e)   In Claim 5, it is uncertain, (1) exactly what

relationship (if any) the "code" stored as per line 3

has to the "source code" entered as per lines 1-2, (2)
exactly how to correlate the entry of the source code
entered as per lines 5-6 with the entry of such source
code as per supra lines 1-2 or exactly what type of an
"input means" can be used for editing of source code
whether previously entered or not as indicated in lines
5-6 or exactly what "source code previously entered" is
being preferred to in such lines 5-6, (3) exactly what
"control of the system" is contemplated as per line 9
(e.g. as the source is entered?), (4) exactly what is
meant by "to call said input means" and pass control
thereto as is set out in lines 10-12 (e.g. to enter and
to edit?) or how to correlate the "control of the
system" as set out in lines 10-12 with supra lines 7-9,
(5) exactly what "operation of said keyboard means" is
contemplated as per lines 11-12 in view of supra line 4
(e.g. what keys or key is used?), (6) exactly what
"code" is being referred to in line 14, (7) exactly how
the "input means" as set out in supra lines 5-6 has the
capability of determining the pause location as set out
in amended lines 14-15, or (8) exactly how to construe
the return of the system to the compiler as set out in
lines 16-17 in view of the many questions set out in
this Office Action re supra lines 5-6.

      f)   In Claim 6, it is uncertain, (1) exactly where
the antecedent is for "said pause location of said

source code" as set out in lines 2-3 and it is not seen
how a "source code" can have a "location" as inferred by
such lines, (2) exactly where the basis is for the
changing of the identification by the "input means"
appearing in lines 4-5 for no such function has been
claimed for such "input means" (see e.g. lines 5-6 of
parent Claim 5), or (3) exactly how the "advancing" of
the pause location as set out in lines 6-9 thereof is to
be considered in view of the change in the pause
location by the input means as is set out in supra lines
2-5 thereof or why such "advancing" is done "after" the
entry of the predetermined quantity of a new source code
and not as a result thereof. In Claim 7, it is
uncertain, (1) exactly where in the system the
"modifying (of) a previously compiled portion of the
source code" (e.g. the object program?) is done as per
lines 5-6 thereof for none of lines 3, 5-6, or 7-9 of
parent Claim 5 are considered to have defined such area
of the system, or (2) exactly how such "modifying" as
set out in lines 5-6 thereof is to be considered re the
"editing (of) source code previously entered" as is set
out in lines 5-6 of parent Claim 5.

g)   In Claim 8, it is uncertain, (1) exactly what
is encompassed by "normally having control of the
system" by the compiler means as is set out in lines 3-4
for once a compiler operates on the source code to

generate the object program, "control of the system" is then under control of the object program, or (2) exactly what is encompassed by the "actuable" means taking control of the system as set out in lines 5-7 thereof in view of item "1" above, or what is encompassed by "a source code byte" appearing in amended lines 6 and 10 in view of what is otherwise claimed. In Claim 9, it is uncertain, (1) exactly what purpose in the system is served by the "pause point of said source code" or "which location" is meant in view of what has been previously claimed, (2) exactly how the "predetermined quantity of new source code" as set out in lines 5-7 is to be considered in view of the entrance of the "source code byte into said system" as is set out in lines 6-7 of parent Claim 8, or (3) under whose control (e.g. the compiler or interrupt means) the identifying and advancing as set out in this claim is done.

h)   In Claim 10, it is uncertain, (1) exactly when the compiler as set out in parent Claim 8 is initialized according to line 2, (2) exactly how the "editor means to modify the source code" as set out in line 3 is to be correlated to the "interrupt means" which enters "a source code byte" as is set out in lines 5-7 of parent Claim 8, or (3) exactly how to correlate the reinitialization means as set out in lines 4-6 thereof with the "return means" as set out in lines 8-10 of

parent Claim 8. In Claim 11, it is uncertain how the
"striking (of) at least one" of the keys on the terminal
as set out in lines 3-4 thereof can be equated to the
entering of "a source code byte into said system" as
such appears in lines 6-7 of base claim 8. In view of
the uncertainty of what is envisioned by the "editor
means" appearing in amended line 3 of Claim 10, exactly
how such "editor means" can include the "controlling" of
"the extent of the source code" as set out in Claim 12
and the "reinitialization of the compiler means" as set
out in Claim 13 especially in view of the actuation of
the interrupt means (e.g. amended Claims 11 and 8) by
the "striking (of) said keys".

       i)   In Claim 14, it is uncertain, (1) exactly what
further limitation is being added by lines 5-6 thereof
that is not covered by what is set out in lines 1-3
thereof, (2) exactly how to correlate the "actuation of
a (any?) key" to activate the interrupt means "for
entering a source code byte (whatever that is suppose to
cover?) into the system" as is set out in lines 7-8
thereof with the previous recitation of entering "source
code" at the keyboard of the console or why an
"interrupt means" is used (e.g. what is being
interrupted?), (3) whether the "source code" compiled as
per lines 9-10 includes the "source code byte" entered
as per supra lines 7-8 or exactly what is encompassed by

"normally controlling said central processing unit" as
set out in lines 9-10 for, under "normal" operation of a
"system", the only function served by a "compiler means"
is the compilation of an object program from source code
(or data) which "object program" controls the "system"
of which the "central processing system" is part of, (4)
exactly what is envisonsed by the "passing of control"
as set out in lines 11-13 in view of the comments set
out in supra comment "3" re lines 7-8 or what the
relationship (if any) would be of "each actuation of a
(any?) key at said keyboard" appearing in lines 11-13 to
"actuation of a key at said keyboard" appearing in lines
7-8, or (5) exactly how to consider "passing control"
and "source code byte" as recited in lines 14-16 in view
of the comments relative thereto set out immediately
above.

j)   Claims 15-17 are rejected initially for being
claims that are dependent upon a rejected parent claim
and not curing the deficiencies noted for such parent
claim.   Also in Claim 15, it is uncertain, (1) exactly
where the antecedent basis is for "said editor means"
appearing in line 2 thereof, or (2) where in the
"system" the "controlling" means set out in lines 2-3
thereof appears.   Also in Claim 16, it is uncertain, (1)
exactly what modification responsive means is being
claimed therein since no editor means is considered to

have been set out in parent Claim 15, (2) exactly what

"a portion of the source code" is contemplated in line 4

thereof, or (3) exactly how to construe what is/set out

in lines 2-3 for the comma set out in line 3 is

considered to have created disjointed phrases. In Claim

17, it is uncertain, (1) exactly what "said controlling

means" is contemplated in line 2 thereof or where in the

system it and its incorporated "identifying" means would

be located, (2) exactly what is contemplated by "a pause

location" in said source code appearing in line 3

thereof or its changing as set out in lines 4-5 thereof

for no "editor means" is considered to exist in the

system, (3) exactly how to correlate the "means for

advancing said pause location" as set out in lines 6-8

thereof with the changing of such location as such

appears in supra lines 4-5 thereof, or (4) exactly how

to construe "new source code" appearing in lines 6-7

thereof with what has been previously claimed (see e.g.

lines 7-8 of great grandparent Claim 14).

     k)   In Claim 18, lines 1-7, and 12-13 thereof are

considered on the same basis as set out supra for lines

1-6 and 9-10 of Claim 14. Also in Claim 18, it is

uncertain, (1) how to correlate the entrance of "source

code" as per line 7 with the entrance of source code

according to supra lines 5-6 and 2 thereof, (2) exactly

what "source code" is modified according to lines 1-8

(see e.g. the question raised in item "1", above), (3)
exactly how to correlate the "an individual editing
operation" as set out in lines 9-11 thereof with the
"modifying" as set out in supra line 8 or what is
encompassed by "an individual editing operation" as is
set out in such lines 9-11, or (4) exactly how to
construe the recitations of "passing control of the
processing unit" as is set out in lines 14-19 thereof
for the reasons set out, supra, for Claim 14. Claims
19-21 are initially rejected as being dependent upon a
rejected parent or base claim without curing the
deficiencies noted for such parent or base claim. Also
in Claim 19, it is uncertain how the editor means as set
out in lines 8-11 of parent claim 18 (e.g. "modifying"
and "editing") has the capacity to control "the extent
of the source code to be compiled by the compiler means"
as is set out in Claim 19. In Claim 20, it is uncertain
where the antecedent basis for recompiling the "at least
a portion of the source" as is set out therein for no
"compiling" of such source code appears to have been
previously claimed. In re Claim 21, such claim is
considered on the same basis set out supra in this
Office Action re Claim 17 and, in addition, it is
uncertain whether such claim is supposed to be dependent
upon claim 20 rather than on Claim 19 as is presently
indicated.

1)   In Claim 22, it is uncertain, (1) exactly what
difference there is supposed to be between the
"compiler system" as set out in previous claims and the
"computer system" as set out in this claim (see also
Claims 23-25), or (2) exactly where the antecedent basis
is for "each pair of successive keystrokes" appearing in
lines 8-9 thereof for supra lines 5-7 do not include any
limitation to an even sequence of keystrokes. Claims
23-25 initially are rejected for being dependent upon a
rejected claim. Also in Claim 23, the recitations of
"having control" and "passing control" as set out
therein are considered as set out supra in this Office
Action re Claim 14. Also in Claim 24, it is uncertain,
(1) exactly how the "source code entering means" as set
out in lines 5-7 of Claim 22 has the capability of
including the source code modifying editor means as set
out in lines 2-3 thereof, or (2) exactly where the basis is
for the "recompiling means" as set out in lines 4-6
thereof (see e.g. the comments set out, supra in this
Office Action, re Claim 20). Also in Claim 25, it is
uncertain, (1) what relationship (if any) there is
between "character codes" appearing in line 3 thereof
and the "character codes" as set out in lines 6-7 or
base Claim 22, (2) exactly how the "source entering
means" as set out in lines 4-7 (e.g. to enter "character
codes") has the capability to include the interrupting

means as set out in lines 4-7 of this claim or the

"control" return means as set out in lines 8-10 of this

claim.

m)   From all of the above comments, it should be

obvious to the applicant that his claims are in need of

correction and are considered not in condition for

allowance even should no further issues exist in this

application.

n)   Because the courts have held that the second

paragraph of 35 USC 112 considerations are primary in an

application and have a profound effect on all other

issues, this second paragraph rejection has been set out

foremost in this Office Action (see e.g. In re Moore,

169 USPQ 236; In re Steele, 134 USPQ 292; and Ex parte

Head, 214 USPQ 551).

17)   The following is a quotation of the first

paragraph of 35 U.S.C. 112:

> The specification shall contain a written
> description of the invention, and of the manner and
> process of making and using it, in such full,
> clear, concise, and exact terms as to enable any
> person skilled in the art to which it pertains, or
> with which it is most nearly connected, to make and
> use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his
> invention.

The specification is objected to under 35

U.S.C. 112, first paragraph, as failing to provide an

adequate written description of the invention and

failing to adequately teach how to make and/or use the

invention, i.e. failing to provide an enabling
disclosure.

a)   Applicant's statement re the "appendix
containing the Pascal source code implementing the
invention for Pascal-S and the IBM Personal Computer"
appearing in the reference to the "PRIOR APPLICATION" on
page 1 has created an apparent contradiction in the
specification as to exactly how applicant achieves his
invention. Applicant's specification on pages, e.g. 6,
7, 14 and 17 still contain references to the use of
Pascal to modify the compiler PL/0 for an 8080/Z80
microprocessor as applicant's "best mode" for carrying
out his invention, and yet in the above referred to
insert to page 1 and the added appendix, applicant sets
forth another "best mode" for carrying out his
invention. The structures of the Z80 and the IBM
Personal Computer are not the same. The PL/0, Pascal
and Pascal-S languages are not the same. Thus the
modifying languages for the two "best modes" cannot be
the same. For the original "best mode", it appears that
only a dozen pages are needed to set out the desired
program whereas for the newer "best mode" at least 74
pages are needed to set out the desired program.
Applicant is respectfully requested to explain the above
recited contradictions.

b)   Applicant is respectfully requested to

incorporate into the specification reference material

showing the details of the IBM Personal Computer and the

N. Wirth article that was modified (see page 1 of the

Appendix) and also showing the date of general

availability of such IBM Personal Computer.

c)   Spelling, language and punctuation errors

abound throughout the specification creating many

problems in interpreting exact/what applicant is

attempting to describe (e.g. in lines 18-21 on page 2, a

"comma" is needed after "translation") and exactly what

is meant by "other object code modules" (emphasis added

thereto) is subject to speculation; a "comma" is needed

after "years" in line 23 on page 2; no antecedent basis

has been set for "the editor" appearing in lines 4-5 on

page 3, thus creating speculation as to what is meant

thereby; a "comma" appears necessary after "console" in

line 13 on page 4; a "comma" appears necessary before

"the" line 17 on page 4; the expression " Otherwise

"appearing in line 18 on page 4 should be ", otherwise";

a "comma" appears necessary after "entered" in line 20,

after "modern" in line 26 and after "Ada" in line 27 on

page 4; a "comma" appears necessary after "approach" in

line 3 on page 5; the term "The" (or "the") instead of

"A" (or "a") appear in many instances in lines 4-29 on

page 7 when making reference to an element for the first

time; the misspelling of "or appearing in line 20 on

page 9; etc. etc.).

d)   The objects of the invention as set out in
lines 2-30 on page 6 are considered to be based on what
                    desideratum
"should" be done (e.g./   ) and not on what the
claimed invention accomplishes.

e)   In re the "SUMMARY OF THE INVENTION" as set
out on pages 7-10, what is set out therein does not
appear reflected by what has been claimed which in any
application sets out the metes and bounds of "the
invention" (e.g. no "file name", no "disk", no "memory
region", no "infinite loop", no "blank" space, no
"interrupt acknowledge signal", no "RST" instruction, no
"low memory", no "jump instruction", no "stack pointer
or other CPU registers", no "alphanumeric or other
non-control character", no "second location of the
source code buffer", no restoration of "CPU registers",
no "first location in the source code buffer", no
"carriage return" character, no "code for a blank
space", no "the end of the first line of source code",
no "display", no "error message", no "next line of
source code", no "screen editor", no "cursor", no
"Recompile Flag", no "source text insertions", no "line
preceding the most recently edited line", no "syntax
error", no "error message", no "disk accesses", no "code
buffer" (getting filled) and no "bank-select memory
schemes" appear in any of the claims presently under

consideration).

f)   The reference to the "8080 or Z80
microprocessor" as set out in line 18 on page 7 is
unacceptable in its present form.   No manufacturer or
document have been identified so as to ascertain the
details thereof and the date of its general
availability.   Should applicant have a document showing
the above it should be incorporated into the
specification.

g)   Fig. 1, as a "schematic" diagram showing "the
relation of the major hardware components" of the
present invention, and the description thereof appears to
be contradictory to the "preferred embodiment" described
in the aforementioned "SUMMARY" as set on page 7-10
presuming that the "arrowheads" indicate data flow.
Fig. 1 shows no bi-directional flow between elements
whereas the above "SUMMARY" describes such flow in many
passages thereof as does the description of Fig. 1 (see
e.g. lines 17-21 and 28-29 on page 11).   What is set out
in lines, e.g. 29-30 (e.g. the compiler being stored in
"main memory") has absolutely no basis.   As set out in
the parent application prosecution re Fig. 1, no
correlation can be found in applicant's description of
Fig. 1 as it appears on specification pages 10-12 with
the referenced "8080 or Z80 microprocessor (see e.g.
line 18 on page 7).   Passages, e.g. "any suitable

terminal" appearing on page 11, comprising a video
display (page 11), forming a unitary console having a
RS-232-C serial link (page 11), transmitting a byte to
"the accumulator (for compiling?) of the CPU (page 11)
and "a byte from such accumulator", not using "the usual
operating mode of a conventional (not the 8080 or Z80?)
system" but employing "an interrupt mode of ... CPU
normally executes the compiler ... stored in an area of
main memory designated ... as Compiler", activating "the
INTERRUPT CONTROLLER" to cause execution of "the editor"
(not capitalized?) "stored in an area of main memory",
the entry of "the received character in the SOURCE
BUFFER in main memory to cause resumption of the
COMPILER by the CPU to analyze "the program (?) source
code" stored in the SOURCE BUFFER for "the COMPILER" to
emit "object code" for storage, and upon completion of
the source code program, control of the CPU "may be
passed to the INTERPRETER" of the object code is in the
form of "intermediate code" (page 12) for execution, an
option given to store "object code in secondary storage"
(page 12) and the compiler may be of the type to emit
executable machine code with the ability "to stop
execution of the program at any time" to examine "the
values of the variables" (what ever they are?) and then
continue execution" (page 12) all show no correlation to
the referenced microprocessor. As a result, the

description of Fig. 1 as it appears on such pages 10-12
must be considered to be based on desideratum because of
having no figure details in support thereof.

h)   Re Fig. 2, no basis is considered to appear
for the conversion of the levels as set out in lines 3-8
on page 13 or for the PRIORITY ENCODER AND THE INTERRUPT
VECTOR REGISTER as shown of Fig. 2 so as to be
referenced as "this chip/this register chip" (see e.g.
lines 14 and 25 on page 13).   Suitable legends are
required for Fig. 2 in order to provide support for what
is written on pages 13-15 relative thereto see e.g.
"interrupt signal" GS; INTA ("interrupt acknowledge");
"interrupt request"; jamming the RST call onto the DATA
BUS; pushing the contents of the program onto the stack
(?); etc.; etc.   The list of integrated circuits
appearing on page 15 purportedly making up Fig. 2 is
considered unacceptable on its present form for no
information is given as to manufacturer, manufacturer's
catalog number from which the listed numbers have been
taken or date of general availability of all of the
listed numbers.   Since the "interrupt operation" as
represented by Fig. 2 appears to be a major feature of
applicant's "invention", no question re such figure
should be left unanswered.

i)   Re Fig. 3, it is uncertain how to correlate "a
control character" and the effect thereof as set out in

lines 19-22 on page 15 and the rest of the operations
shown by Figs. 5-6 or where the figure support is for
what is set out in lines 19-26 on page 15. What is set
out in lines 27-28 on page 15 and continued through to
line 2 on page 16 do not appear to be consistent with
Fig. 3 for such figures shows the Interrupt and Editor
routines as separate routines and the Editor routine
(and not the Interrupt routine) serving the RESTORE
REGISTERS block. Also re Fig. 3, no distinction is made
between the INTERRUPT routine and the ENABLE INTERRUPT
routines shown thereon. Since every block shown by Fig.
3 is based on programming, applicant is respectfully
requested to identify where in the program submitted
with this application each of the blocks appear.

     j)   Re Fig. 4, no figure support appears for any
initialization of the compiler in support of lines 8-9
on page 16 and no indication appears on such figure as
to the origin/name given to the top most vertical line
on Fig. 4. It is uncertain exactly how to construe the
determination of a symbol/nonsymbol (see e.g. lines
21-30 on page 16) with the determination of a
control/valid characters as set out in lines 19-26 on
preceding page 15. No figure support is considered to
be shown for the alternative operations suggested by
what "may" be done by the applicant (see e.g. lines 1-9
on page 17).

k)   The copy of the widely published compiler PL/0
of Prof. N. Wirth (Ref. 12) which is referenced in lines
9-11 on page 17 and which "may be modified for
implementation in the present invention" (emphasis added
thereto) as submitted in the parent application is
considered unreadable in many places and many pages
thereof are not numbered - see e.g. pages 339, 340 (?),
341 (?), 343 (?), 344 (?), 345 and 346. Also, re such
modified compiler PL/0 publication, it is not known what
the difference would be between it and the newly cited
and modified Prof. N. Wirth's "Pascal-S" implementation
of the invention using the IBM PERSONAL COMPUTER as
shown by the APPENDIX submitted with this application.
As indicated earlier in this Office Action, the initial
"preferred" embodiment appeared to be a dozen pages long
(see the July 1983 Microcomputing article, infra) whereas
the latter submitted "preferred" embodiment required at
least 74 pages, approximately six times the number of
pages.

l)   The July 1983 microcomputing article submitted
by the applicant on May 18, 1984, on page 52 thereof,
indicates that applicant implemented his invention on
yet a third system e.g. "two S-100 computers: A Godbout
system and a CCS/Cromemco system, using the keyboard
interrupt scheme". A vast majority of what was written
in the above referred to article and applicant's

specification is the same with applicant's purported modification to Prof. Wirth's compiler being added to the end of such article. Applicant's purported modification to the Wirth compiler as set on pages 17-19 of the specification and page 65 of the Microcomputing article do not agree in all respects (e.g. the FETCH procedure is not shown in the article).

   m)   In response to this Office Action, applicant is respectfully requested to indicate (e.g. by page and line number) exactly where in the newly submitted 74 page appendix that the modifications to the Wirth compiler as set out on specification pages 17-19 appear. It is also respectfully requested that the programming covering the operations for Figs. 4, 5 and 6 and the alternative features (see e.g. pages 19-26) be specifically pointed out in such 74 page appendix. This request is being made because no copy of the unmodified program has been submitted so a determination can be made as to exactly what is in the prior art and what modification thereto that the applicant has made that is worthy of patent coverage.

18)   Claims 1 through 25 rejected under 35 U.S.C. 112, first paragraph, for the reasons set forth in the above objection to the specification.

19)   Applicant is reminded of the proper content of an Abstract of the Disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains.

If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure.

If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement.

In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof.

If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following: (1) if a machine or apparatus, its organization and operation; (2) if an article, its method of making; (3) if a chemical compound, its identity and use; (4) if a mixture, its ingredients; (5) if a process, the steps. Extensive mechanical and design details of apparatus should not be given.

a)   It is not understood what code "the source code" appearing in line 4 that is purportedly "stored in a memory bufer" according to lines 4-5 is referring to or its relationship (if any) to "source program" " entered or edited" as set out in lines 2-3. In lines 5-6, it is uncertain, (1) how to correlate the "video terminal" to what has been claimed for the claims set

out the extent of the invention, (2) how to correlate

"entry <u>and</u> edited" appearing in supra line 3 and "entry

<u>or</u> editing" appearing in infra line 9, or (3) how to

construe "the source code" appearing in line 6 with "the

source code" appearing in supra line 4. No antecedent

use of "compiler", "source code", "terminal keyboard",

"central processing unit", "struck key", "advance of the

compiler" and "reinitialization of the compiler"

appearing in lines 3, 4, 6-7, 7-8, 10, 11-12 and 13,

respectively, appears for such recitations to be

referred to by "the". The "," appearing in line 14 is

considered to have created disjointed phrases and thus

should be deleted. The correct title should be

"Abstract of the Disclosure".

20)   The following is a quotation of 35 U.S.C. 103

which forms the basis for all obviousness rejections set

forth in this Office action:

> A patent may not be obtained though the invention
> is not identically disclosed or described as set
> forth in section 102 of this title, if the
> differences between the subject matter sought to be
> patented and the prior art are such that the
> subject matter as a whole would have been obvious
> at the time the invention was made to a person
> having ordinary skill in the art to which said
> subject matter pertains. Patentability shall not
> be negatived by the manner in which the invention
> was made.
>
> Subject matter developed by another person, which
> qualifies as prior art only under subsection (f)
> and (g) of section 102 of this title, shall not
> preclude patentability under this section where the
> subject matter and the claimed invention were, at

the time the invention was made, owned by the same
person or subject to an obligation of assignment to
the same person.

21)   Claims 8, 10-16, 18-20 and 22-25 are rejected
under 35 U.S.C. 103 as being unpatentable over Benson
et. al. when considered with Spangler et. al.

a)   The Benson et. al. publication is used as the
primary and/or base reference and is considered to show
the general real-time compiling system being advanced by
the applicant whereas the Spangler et. al. system is
introduced to show that a console having a keyboard for
key interruption of a compiler system for real-time
entry of data/source code, even though not shown in
Benson et. al., is considered to be inherent in such
systems. No change in the use of such references in the
parent application is being made in this Office Action.

b)   In view of the Wadsworth affidavit filed by
the applicant in the parent application, he is
considered to be accepting the non-underlined portions
of the claims as either being old in the art or that he
understands where they are found in the cited
references. All of the rejected claims in this Office
Action are the same as those discussed in the Wadsworth
affidavit excepting for numbering. As a consequence,
only the underlined portions of the respective claims in
the Wadsworth affidavit are considered to warrant a
response thereto.

c)   That Benson et. al. is a computer/compiler
system embracing real-time operation is an established
fact (see e.g. pages 202 and 21-212 thereof).   Lines,
e.g. 9-27 in the right hand column on page 211 and 45-50
in the left hand column on page 212 show that the Benson
et. al. system contemplated the equivalent of
applicant's claimed "contemporaneous real-time entry and
compilation of source code" (see e.g. lines 1-2 of Claim
8) and the interruption of "on-line operation" wherein
the control of the system is taken over for the entry of
source or modification data and the control of the
system is then returned to the compiler (see, e.g. lines
5-9 of such Claim 8).   Lines, e.g. 7-41 of the left hand
column of page 210 of Benson et. al., are considered to
describe a "real-time supervisor" which is easily the
equivalent of applicant's generally claimed "editor
means" (see e.g. Claim 12).   Lines, e.g. 47-57 in the
right hand column on page 211 of Benson et. al. easily
set out the equivalent of the claimed reinitialization
of "the compiler means after modification" as is set out
in lines, e.g. 5-7 of applicant's dependent Claim 10 and
in applicant's dependent Claim 13.

d)   Lines, e.g. 37-44 in the right hand column on
page 204 and in lines 62-64 in the righthand column on
page 211 of Benson et. al. indicate that the
interruption so as to introduce the modification is in

response to "some external event" and such event would
be "system-dependent as far as the method of calling the
compiling and modification are concerned,". All
computing systems as shown by Benson et. al. inherently
have consoles (e.g. terminals) with control
keys/keyboard, and the easiest and/or most proficient
way of creating "some external event" is to strike "at
least one of said keys" (see, e.g. lines 4-5 of Claim
11) while the compiler is in control of the system.

e)   In Spangler et. al., elements 12, 65 and 73 on
Fig. 3B, addresses 3502-3574 on Fig. 4A, addresses
7506-7777 on Fig. 4B, addresses 12034-12534 on Fig. 4C,
addresses 14,560-14,654 and 16,410-16,615 on Fig. 4D,
lines 9-11 of Column 1, lines 62-64 of column 2, lines
59-65 of Column 3, lines 28-33 and 52-55 in column 5,
lines 64-68 in column 9 and continues through to line 5
in column 10 and lines 23-62 in column 12 all show in
combination a console with a keyboard for key
interruption in a compiler system for real-time entry of
data/source code. It would be well within the
capability of one ordinarily skilled in the art to
combine the key/keyboard facilities as shown by the
compiler Spangler et. al. system so as to supply what is
considered to be inherent in the Benson et. al. compiler
system.

f)   The underlined portions of Claims, e.g. 14-16,

18-20 and 22-25 (the counterparts to the rest of the
claims as set out in the aforementioned Wadsworth
affidavit) are considered to repeat and/or be the
materal equivalent of underlined portions of claims
already discussed.

22)   Claims 9, 17 and 21 are rejected under 35
U.S.C. 103 as being unpatentable over Benson et. al.
when considered with Spangler et. al. as applied to
claims 8, 10-16, 18-20 and 22-25 above, and further in
view of Sippl et. al.

        a)   All of Claims 9, 17 and 21 are considered to
add only the equivalent of a "loop" to the claims/series
of claims from which they depend. As stated in the
prosecution of the parent application, a "loop" is an
old and well known programming tool to ones ordinarily
skillled in the art.

        b)   Pages 294, 844 and 845 of the Sippl et. al.
book, "Computer Dictionary and Handbook" illustrate but
one example of such tool.

        c)   In Benson et. al. lines, e.g. 37-44 and 40-41
in the right hand columns on pages 204 and 205,
respectively, are considered to constitute one basis for
the temporary suspension of the compiler program (e.g.
to perform a "loop") and to allow the system to respond
to "some external event" in a appropriate way (e.g. to
respond to some variable). Previously mentioned lines

47-57 in the right hand column on page 211 of Benson et.

al. are considered to show the necessity to keep the

supervisor (e.g. "editor") linkage (e.g. "pause

location") current so that new calls to the modified

procedure may be responded to.

23)   King et. al., Cosserat, Deerfield, O'Meara and

Pardo et. al. are cited as pertinent prior art.

24)   **AN SSP OF THREE MONTHS IS SET.**

25)   Any inquiry concerning this communication or
earlier communications from the examiner should be
directed to H. E. Springborn whose telephone number is
(703) 557-2011.

        Any inquiry of a general nature or relating to
the status of this application should be directed to the
Group receptionist whose telephone number is (703)
557-2878.

HES/pal/d

September 5, 1985

HARVEY E. SPRINGBORN
PRIMARY EXAMINER
ART UNIT 232